Research & Development

U.S Army Engineer Research & Development Center

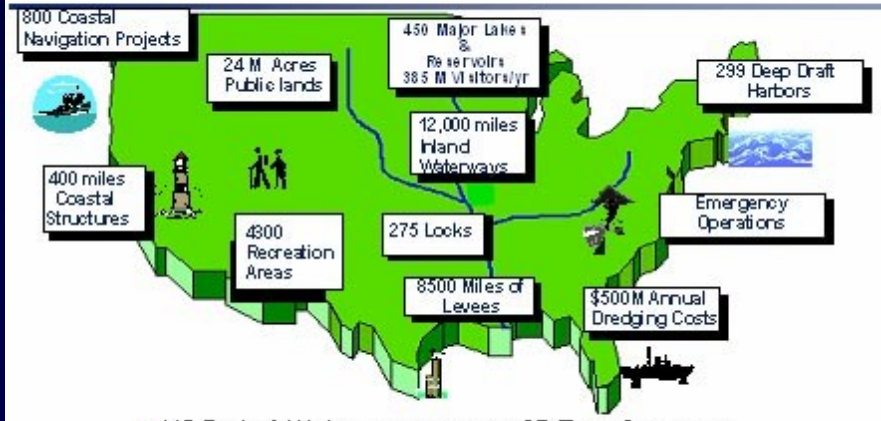
Scope of R&D

Support the Army in Garrison

78,029 Paved Miles
11.8 Million acres used for training
Over 400 Boiler Plants
size = NJ, CT, DE & RI
12.1 Million Acres
1.1 Billion Square Feet
(40 square miles under one roof)
13,000 Sites require cleanup at a cost of $26 Billion.

Over 150 large installations worldwide
Approximately 40% of DoD
Replacement Value: $168.5 billion

Support to the Nation's Prosperity & Security



- US Ports & Waterways convey > 2B Tons Commerce
- Foreign Trade alone Creates > $160B Tax Revenues
- Cumulative Flood Damage Prevention >$290B

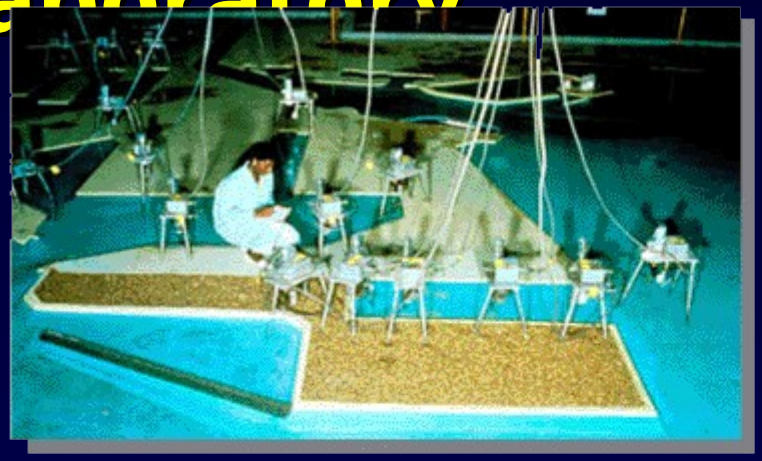
Support to the Army in Theater

- Force Projection Increases Criticality of Engineer Mission
- Technologies Facilitate Peace Keeping and Contingency Operations

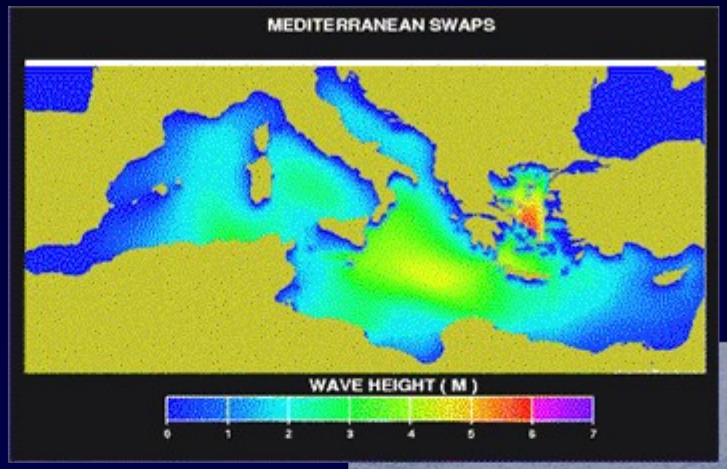
ERDC Research Areas

- Military Engineering
  - Mobility, Survivability, & Logistics
  - Topography
- Installations
  - Infrastructure
  - Environmental Quality
- Civil Works
  - Infrastructure
  - Environment
  - Operations

Coastal and Hydraulics Laboratory



Physical Models



Numerical Models

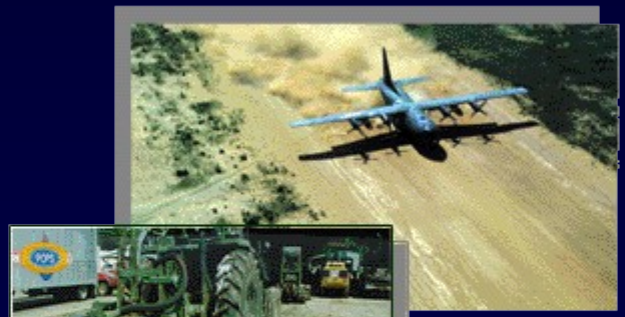
Navigation

Flood Control

Sustainment Engineering

Geotechnical & Structures Laboratory

Centrifuge Research

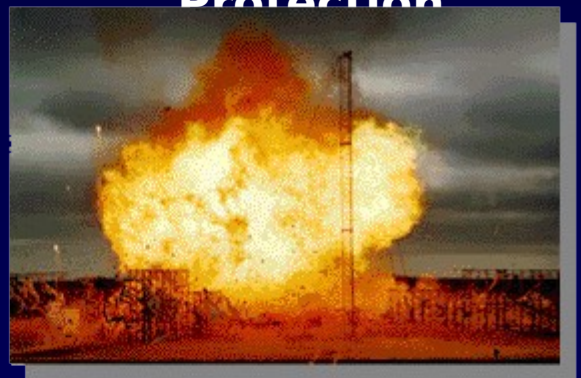


Airfields and Pavements

Terrorist Threat Protection

Heavy Vehicle Simulator

Survivability & Hard Target Defeat



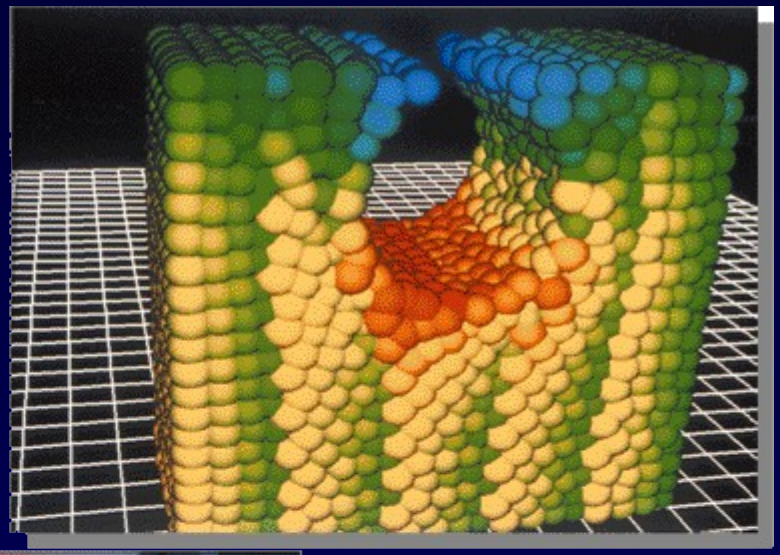
Explosives Effects

Mobility

Concrete

Information Technology Laboratory

CADD/GIS Technology



DoD High Performance Computing Center

Cold Regions Research and Engineering Laboratory

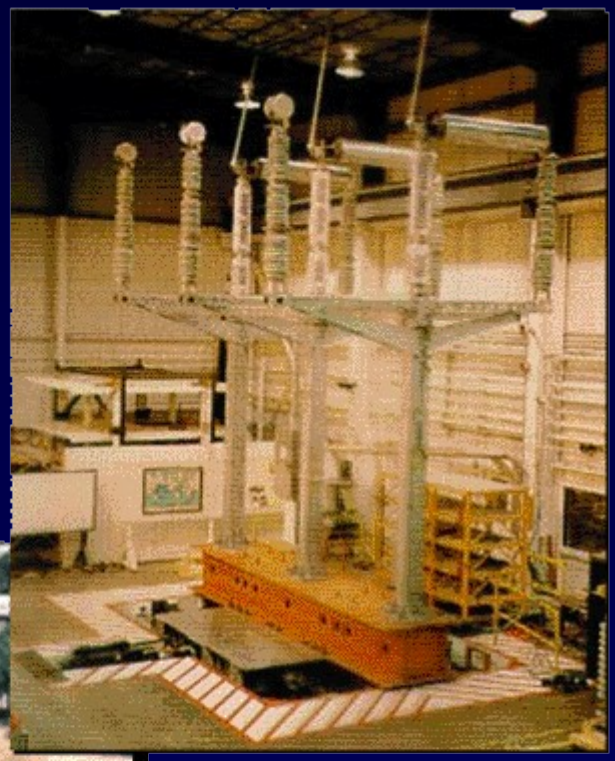
Ice Effects

Cold Weather Design Guidance

Frost Effects

Military Engineering

Construction Engineering Research Laboratory

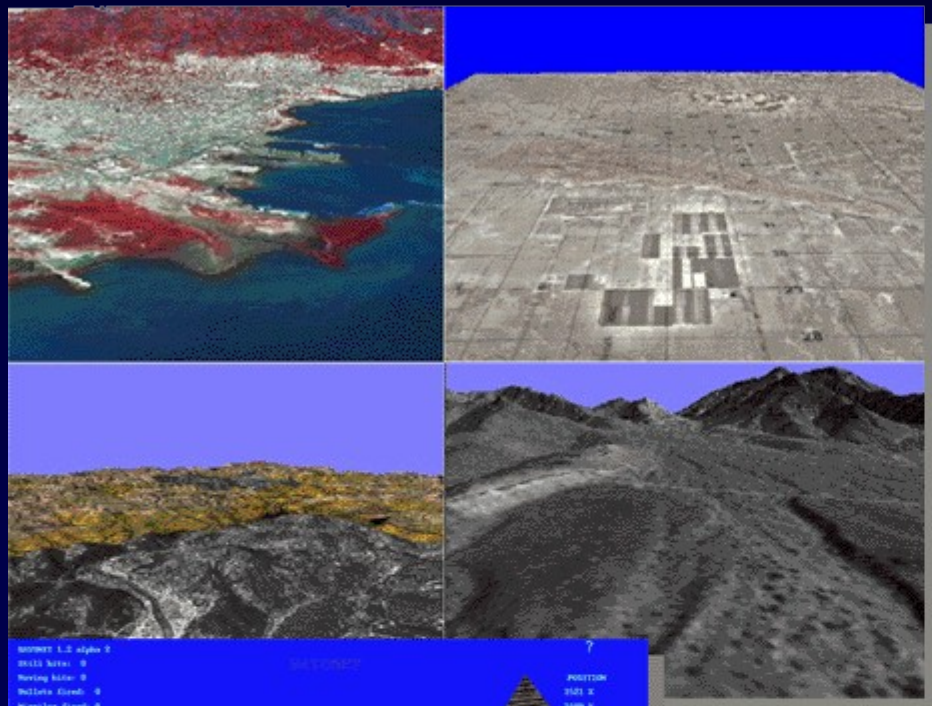


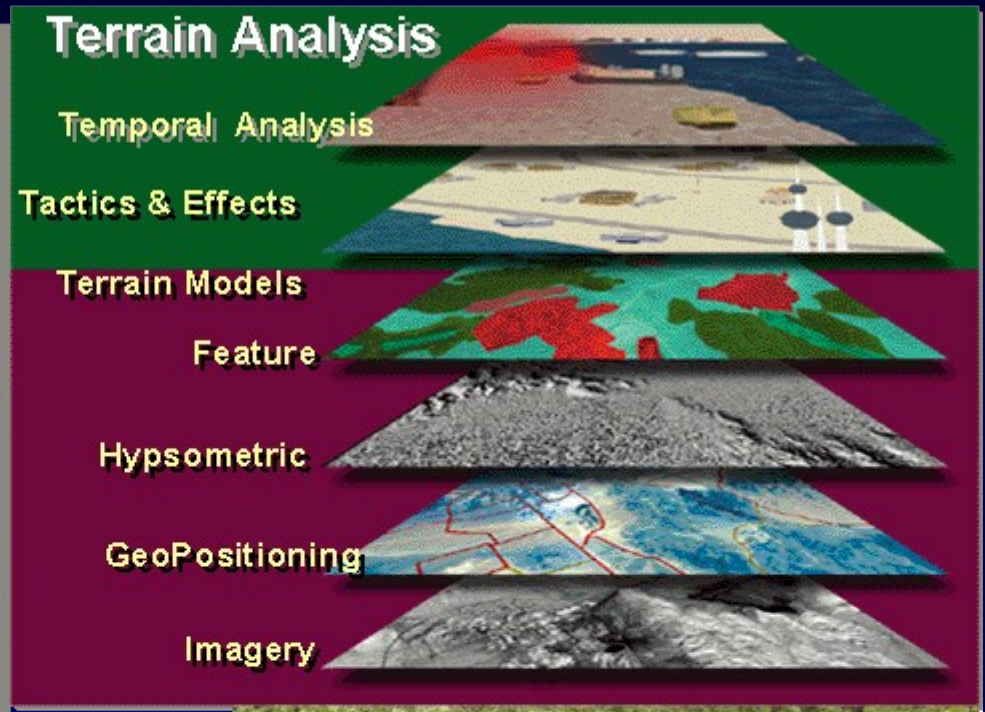
Installation Operations

Facilities Acquisition and Revitalization

Military Land Management

Topographic Engineering Center





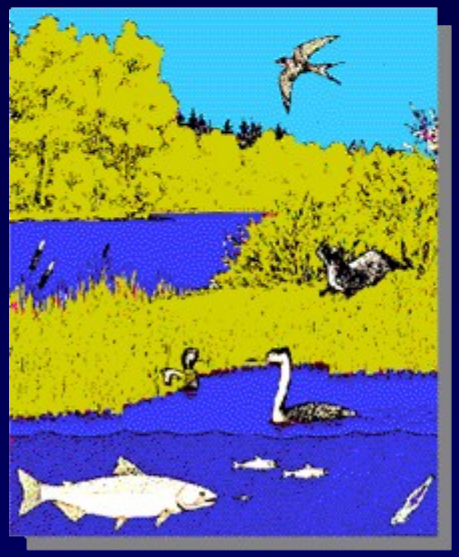
Terrain Generation, Reasoning & Visualization

Combat Terrain Info Systems

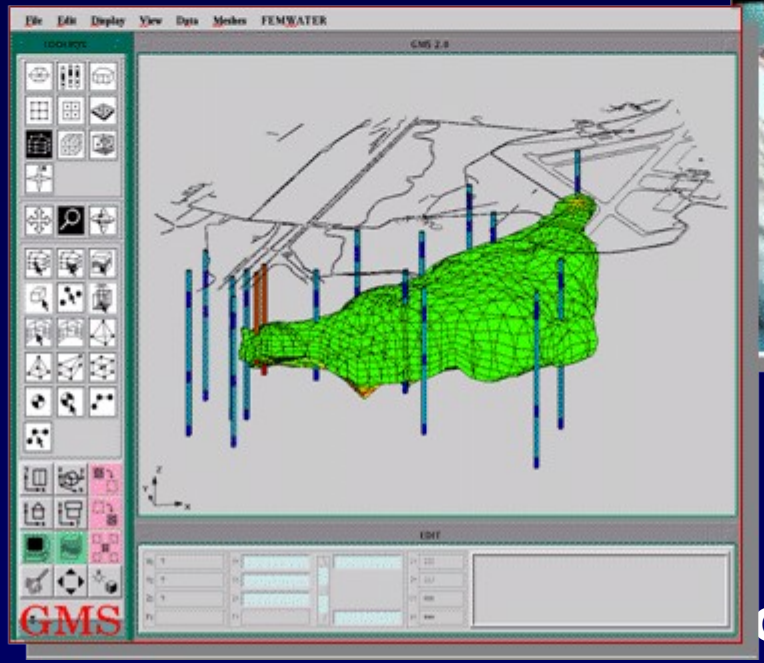
Environmental Laboratory

UXO

Hazardous and Toxic Waste



Aquatic Habitat



Ground Water Modeling

Environmental Chemistry